AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 22, line 26 with the following replacement paragraphs:

2. Core Modules

Figure 2 illustrates the core modules within the system of Secure Data Interchange. In this section we briefly describe each module in relation to the other modules, and provide more details in later sections.

Please replace the paragraph beginning on page 37, line 13 with the following replacement paragraphs:

4. Query Execution Module

The query execution module is a key component of the SDI system. Its key functionality is:

Please replace the paragraph beginning on page 65, line 7 with the following amended paragraphs:

~~meeting, engaged in an important phone conversation~~

Resolution Credentials

Section 2.2.1 of this patent discloses the use of resolution credentials for the facilitation of agent-agent interactions. Resolution credentials enrich the quality of such interactions because they certify the status claimed by individuals, allowing agents to maintain relationships of trust. On a more practical level, resolution credentials are of use for matching and introducing users to each other on the basis of common interests, for guarding access to high-level users (with the agent acting as a gate-keeper), and for flagging times at which an individual is reachable (and not tied up in meetings, or the like, as specified by the scheduling agent).

7.2 General Description

Please replace the paragraph beginning on page 70, line 25 with the following replacement paragraphs:

8.2 Client-side Query Execution

As described earlier, a key variation of SDI retains a local data warehouse and query execution module that contains information specific to a single agent, on the client machine of that agent. It is then possible, via the same query execution controls as described in the central SDI data warehouse, to allow vendors to characterize and profile a user based on its local data, but without gaining explicit information about the user's local data. The vendor can push appropriate methods and targeted services. We describe a number of bottom-level applications later in the patent, including personalized web pages, ad-networks, etc.

Please replace the paragraph beginning on page 74, line 25 with the following replacement paragraphs:

9. Data Management

The invention of SDI, in its most general form, refers to the system for a privacy-protected market for data interchange between multiple parties. In this section we discuss possible methods for an agent to manage its disclosure of data to the data interchange, and to other agents in the system. We allow agents to adopt different identities, and submit different information under different identities. The idea is that a pseudonym prevents other agents from exchanging information. Given an identity management policy, the *data management policy* is then used to determine what data to submit to the central data server, or release to other agents, under a particular pseudonym. The agent needs to choose *what* data to release, and what *price rules* to associate with that data. We propose client-side "proxy agents" to intermediate the interactions between agents, and manage data provided to the central SDI data warehouse; and methods to manage an agent's identity in interactions with other agents, for example via pseudonymous and anonymous interactions. The proxy agents control the amount and types of information exchanged between

agents. We refer to the proxy as "client-side", because it resides on the machine local to the agents that participate in the system of SDI. The client-level SDI proxy, implemented as a client program running on the user's client machine, manages all data release from the user to other agents and to the central SDI data warehouse. The proxy might usefully provide a rule-based interface to allow a user to select appropriate data management policies.

Please replace the paragraph beginning on page 80, line 17 with the following replacement paragraphs:

9.3 Data-Release Policy

The client-side SDI proxy provides support for automatic submission of profile data, and other types of data, to the SDI central data warehouse. This includes policies for pricing queries, and policies for introducing random perturbations to data.

Please replace the paragraph beginning on page 91, line 13 with the following amended paragraph:

9.7.1 Initializing Identity and Data Management Policies____The client-side SDI proxy might provide a rule-based interface to allow a user to select from a menu of defaults an appropriate profile management policy, or to configure with the aid of a decision tree an appropriate profile management policy for a user. Profile management policies define how a user will interact with various classes of vendors (depending on the nature of the business that the vendor is engaged in), the kinds of uses to which the transactional information that a vendor collects can be put to, and the amount of information that a vendor which collects profile information about a user is authorized to release. The client-level proxy manages a user's interactions with vendors, to keep them within desired policies.

Please replace the paragraph beginning on page 92, line 15 with the following amended paragraphs:

An agent can use its pseudonymous identity to initialize transactions with a vendor, and also to encrypt messages. However, it may be more efficient to exchange future messages with a shared key pair—this is more efficient to implement that an asynchronous key pair cryptographic solution. Messages can be encrypted with the shared key, that only the user and the vendor know. This (1) validates that the message is from the sender; (2) ensures that only the intended recipient can read the message.

9.7.3 Automatic Client-Side Profile Management__When a user clicks to a new URL the SDI proxy agent must determine (a) the identity to adopt with the vendor; and (b) the profile-management policy to adopt with the vendor. The first-step can be performed by local look-up, in a stored table of the vendors that the user has interacted with. Should the vendor be a new vendor, then it is necessary to implement the identity-management policy based on certificates provided by the vendor, and then either use an existing pseudonym or alternatively adopt a new pseudonym.

Please replace the paragraph beginning on page 98, line 20 with the following replacement paragraphs:

10. Methods for Data Perturbation
In this section we introduce data perturbation methods to augment data values with randomized noise, to allow queries to tradeoff price and quality, and to allow a user to protect his/her identity by hiding revealing details of submitted data elements.

Please replace the paragraph beginning on page 102, line 3 with the following replacement paragraphs:

Finally, all cryptographic techniques are subject to compromise by successful attacks on the cryptographic scheme or by the loss/theft of private keys. Such problems are present in all uses of cryptography. In comparison, the method of random perturbation is an information-theoretic technique, and not subject to the same problems.

10.1 Technical Details

We propose one possible method to select an appropriate amount of noise to add to data. The noise can be added in two places:

Please replace the paragraph beginning on page 106, line 20 with the following replacement paragraphs:

In this case an agent chooses the standard deviation for its Normal distribution by assuming that the randomized value $X' = X$, i.e. that the random noise distribution generates zero noise. This is the worst-case, maximizing $Pr(A\_6 \mid X)$ because $Pr(x \mid A\_6)$ is maximized and the other terms in the Bayesian expansion are invariant.

10.2 Rounding and Binning of Data as an Alternative to Random Perturbation

Please replace the paragraph beginning on page 107, line 21 with the following replacement paragraphs:

A useful variation on this method is to control the amount and type of information released, but only releases accurate information. The degree to which a user can be identified if it submits information X to a vendor depends on the other agents that have submitted similar information. For example, if X is very detailed (e.g. my street address), then it is probable that no other agent has submitted the same information, and I will self-identify myself with that information. On the other hand, if X is quite abstract, for example my ZIP code, then it is quite possible that a number of other agents with the same ZIP code have already submitted and released the same information. The method discussed above can be simply adapted to allow a client-side SDI proxy agent, or the SDI data warehouse, to decide how much information to release in order to protect a user's identity, based on information about the data already in a database. For example, instead of my street address my agent could choose to submit my ZIP code.

10.2.1 Example: Binning Techniques

Please replace the paragraph beginning on page 109, line 24 with the following replacement paragraphs:

Another approach to discrete data is to apply the "approximation" technique and allow agents to specify a genre of music for example, or a prototype value from a semantic cluster. This is equivalent to stating a range of salaries. For example, the system of SDI can provide clusters for music, and allow a submitting agent to state the cluster of the artist for the CD that it just purchased instead of the name of the artist.

10.4 Noise with Bundles of Information.   In general agents will release more than one piece of information to other agents, in a bundle of information. Intuitively, when agents submit a bundle of information they open up more possibilities for adversaries to determine their identity, because a bundle of independent information reveals more about a user than a single piece of information.

Please replace the paragraph beginning on page 113, line 12 with the following replacement paragraphs:

11. Architectural Variations

There may be commercial contexts in which an SDI service can be established where there is already in place a pre-existing trust relationship between multiple vendors and a third party. Such third parties are inherently motivated to provide services to enhance advertising and e-commerce for their existing and potential customers. These third parties may include, for example, web hosts or e-commerce service providers (ESPS) which often have hundreds or thousands of sites which they host, Web portals, information and commerce service manufacturers, advertising and affiliate network services and data analysis and business intelligence tool providers (which includes the business to business application).

Please replace the paragraph beginning on page 119, line 3 with the following replacement paragraphs:

Another variation, that relies on the user placing trust in the ISP-level proxy server, provides the ISP-level proxy with the e-mail address for each pseudonym. This push method is more efficient, because the ISP proxy and the client proxy communicate only when new messages arrive, but provides the ISP proxy with information to compute all the pseudonyms for a single user— probably undesirable.

12.2 Support for Pseudonymous Physical Mail

12.2.1 Vendor to User

A vendor must hold a "physical mail certificate" to be able to send mail (packages, letters) to a user under a pseudonym. The certificate is similar to the "electronic mail certificate", in that it is signed by the private key of the user's pseudonym, and indicates that the vendor with public key P*V can send mail to the user (under the pseudonym).

Please replace the paragraph beginning on page 122, line 4 with the following replacement paragraphs:

This protocol is simpler than full cryptographic anonymous credit card mechanisms because the SDI acts as a rusted third party to both the user and the vendor.

12.3.2 Electronic Cash

[Chaum 85; Chaum 92] Electronic cash is anonymous, just like physical cash. The user purchases electronic cash from an electronic bank, presenting blinded notes, so that the bank has no record of the note numbers that it issues to the user. For example, the user generates a new note number, X, and has the bank sign a blinded copy with its $10 signature, S(B(X), SKBANK$10). Then the user, or the first-level proxy for the user, removes the blinding factor, and can use the electronic cash as tender. Whenever the note changes hands the recipient needs to check with the bank that it has not yet been spent, because notes are easily copied, but not forged.

Please replace the paragraph beginning on page 122, line 19 with the following replacement paragraphs:

12.4 Client-Side SDI Proxy

The client-level SDI proxy, implemented as a client program running on the user's client machine, manages all data transfer between the client machine (and the user), and other vendors and the central SDI data warehouse. A key function of the client-level proxy is to implement profile management for a user, to control the ability of agents to track a user as he/she interacts with multiple vendors. The client-level proxy also controls release of profile information: the addition of demographic and other personal information to profiles, and the control of random perturbation to fields to prevent linking across user profiles.

Please replace the paragraph beginning on page 126, line 3 with the following replacement paragraphs:

13.1. Static Data Mining Applications

This section describes specific applications of SDI-based static data mining. A central example is collaborative filtering and personalization applications in electronic commerce, where consumers and vendors provide information to SDI, and the information can be queried within the price and data-access rules placed with the data by owners of the information. We refer to the variation of SDI with consumer profile information as the "iamworthit" system, because users can place profile information in a shared database and receive payments in return for queries performed by vendors. Vendors can use the profile information to build better customization models, and provide customized products to customers based on their profiles and what has worked with other customers with a similar profile.

Please replace the paragraph beginning on page 132, line 11 with the following replacement paragraphs:

13.1.1.3 An Example Profile Vector

Suppose we have a database containing information on customers' ages, their musical preferences (i.e. an answer to a survey asking: "Which do you prefer, Mozart or the Beatles?"), and the contents of the emails they've written. Furthermore, suppose the only salient variables in all the emails written consist of the words

Please replace the paragraph beginning on page 133, line 5 with the following replacement paragraphs:

13.1.1.4 Choosing an Appropriate Level of Data Granularity

We define the term granularity to denote the level of detail available within a given set of data, which is often structured hierarchically. Suppose a grocery store database contains records for a box of flavored gelatin powder. This could be categorized in a variety of ways; moving from the most specific to the most general, we might treat this data point as "12.5 ounce, strawberry flavor, Jello-brand gelatin dessert" (which would be entirely different from "12.5 ounce, banana flavor, Jello-brand gelatin dessert"), or as "12.5 ounce Jello gelatin" (a categorization which would treat as identical the strawberry and banana Jellos), or as "flavored gelatin", or as "dessert", or as "food", or as "grocery".

Please replace the paragraph beginning on page 140, line 27 with the following replacement paragraphs:

13.1.1.6 Example of Cross-database Analysis

In this example, suppose that the central SDI data warehouse contains data submitted by the following vendors:

Please replace the paragraph beginning on page 142, line 14 with the following replacement paragraphs:

13.1.1.7 Methods for Validation

To a large degree, the overall success of an SDI analysis is the relevance of the connections that are inferred from the data. It is often the case that a certain amount of validation is required to determine which analytical approaches are the most successful, given that the analyst has had to choose a particular combination from a wide range of algorithms, data sets, levels of granularity, and parameter settings. The process of validation measures the relative success of a given project, and is used to guide the analyst through further iterations of tuning and adjustment so as to optimize the final results of the analysis.

Please replace the paragraph beginning on page 170, line 13 with the following amended paragraph:

It is also reasonable to provide the technique of collaborative filtering to identify users whose profiles are particularly similar to the material which is being viewed, e.g., those users who are determined to have a high proficiency level with regards to that particular material. Because the requesting user may be seeking to query the expert or seek edification on that material, typically same consideration is conveyed in exchange for that information. In a variation, [[a more -----------]] data exchange may be provided if collaborative filtering identifies fairly similar users to the presently viewed material which also demonstrate, via their profiles, considerable complementarily in the particular knowledge which they are likely to possess. Vendors may also [[--------------------- and]] facilitate this type of information exchange on their sited between these complementary, (yet metrically similar) customers.

Please replace the paragraph beginning on page 171, line 27 with the following replacement paragraphs:

The large statistical information stored in SDI may be useful for the purpose of guiding discussions in a chat or forum context. Individuals may use the system in order to guide the flow of their own thoughts (where it is tuned to their own personal profiles) or that of what a particular

individual with which they are corresponding at that moment (or in this case ideally both of their profiles) or (to appeal to the overall discussion forum or chat room) the collection of user profiles in that discussion forum. Again, in a variation, the system may be tailored to give additional weight to the particular historical experiences of the individual or group, thus if implemented in this way to the individual, the system may act in a similar capacity to a remembrance agent.

13.1.3.12   Example: Vacation Package System

Please replace the paragraph beginning on page 175, line 14 with the following amended paragraph:

In one variation, the virtual [[----------]] jury is selected based upon similarity to the plaintiff. In another, it may [[---------]] consist of individuals which are individually similar to both plaintiff and dependent on more effectively a combination of individuals who are similar individually to the plaintiff and the defendant respectively. It is believed, in addition to guilt innocence, a more equitable assessment of the monetary compensation which is provided to the plaintiff by defendant, it such a equal mixture of empathizers from both sides constitute a virtual jury.

Please replace the paragraph beginning on page 176, line 18 with the following amended paragraph:

It is certainly reasonable and appropriate to adopt the present application framework to [[more]] several fields of medicine. ~~For example, enabling physicians to identify other physicians have   had patients with the identical pathological profile and medical history. This enables them to   current medical history and clinical data, insights, observations, etc., in order for the physician to --------- the present clinical based on the expert advice and collaborative feedback from the other physicians possessing very similar experiences.~~ Likewise patients could instantly access the physician or physicians which have or had experienced the most similar clinical situations that and the present situation of the patient in order to seek a second opinion. ~~Physicians~~

~~sharing unique clinical experiences (particularly clinically or scientifically in _____ or series/problematic could use the _____ scheme in order to _____ _____ companies, etc.. Finally one could also apply the~~ _____

_____

_____ .

Please replace the paragraph beginning on page 181, line 6 with the following amended paragraph:

In this preferred application (of non-competitive bidding) the SDI agent for the collective group achieves a commitment from each prospective investor in the group that within a range of prospective terms, each investor would be willing to commit its participation in the proposed investment opportunity. Accordingly, each company (assuming there are more than one) also agrees to a predetermined range of terms with which it would be willing to accept from the collective group of investors. Both sets of information (typically recommended by the SDI representation each associated party) are disclosed to the main (party neutral) SDI entity. If overlap exists in the range of terms or the ranges are close to one another, the introduction and negotiation between the parties becomes initiated (through the company(s) are not made aware of whether the overlap exists or is merely "within the general proximity"). ~~of accept_____ _____introductions on the interest of the parties (though most markedly the companies)~~

Please replace the paragraph beginning on page 212, line 1 with the following amended paragraph:

It is reasonable to offer individuals completely free, Web design/development and hosting services which are offered and mass marketed. At the time this patent was written, Web developers were offering such free services in exchange for revenue sharing for advertising product syndication or e-commerce offering on the individual's site. Iamworthit could conceivably be deployed in

conjunction with this commercial model whereby either a portion of the user's own iamworthit profiles are used to subsidize (or subsidize in part) the portal and the developer and/or revenues shared from profits from iamworthit subscribers who subscribed from the portal are utilized also (or instead). As such, it is also reasonable for such a developer to provide links on affiliate sites (e.g. access an affiliate network) which offers free individual portals in exchange for subscribing to iamworthit (and perhaps agreeing to offer a similar iamworthit expectation from that portal as well from which the user can also share in a portion of the revenue stream. Such a program could even be structured in its revenue distribution to the subscribers as a multi-level marketing network. ~~Users could even receive value for providing links to the vendors site either both (e.g. as "cob shopping portal) direct off-line encounters in the other users as prospective customers to the URL. (where the URL is unique for each individual.~~

Please replace the paragraph beginning on page 224 line 28 with the following amended paragraph:

With time, stem cell medical applications proliferate thus, the "upside benefit" increases in proportion over time. However, if this "up-side benefit" (of the original collection of contracts from the various relevant companies in the field to which the original research activities pertained) was insured through the futures market the investor can benefit from the value and growth. Investors can include researchers whose contribution of time and effort and dedicated focus on the problem had been estimated. This can allow valuable talent to receive the incentives to join the initiative from the outset in a way which would be very difficult to achieve with other standard recruiting approaches. It is important in this scenario, however not to over incentivize the managers and executives such that they may lose incentive to make the company succeed. In this scenario that the company does not go bankrupt, proper incentives could be provided to further encourage similar scientific and innovative entrepreneurial initiatives in the future, thus a portion (perhaps a fraction of the upside in these other entities could be provided even in the event of success (and irrespective of the level of risk associated with the original venture). Certainly the field of stem cell research is only one example of many speculative new technology fields with potential for enormous overall impact

upon all aspects of the economy and society. Another example cited elucidates other potential features and variations of the present novel scheme. The field of nano[[----]] technology is believed by many to become perhaps the most important and pervasive technology paradigm of the twenty-first century impacting almost every industrial sector. As such, many different critical problems will need to be solved, each with potentially enormous associated economic opportunity. There is, however, considerable risk associated with the probability for industry and research institutions to realize these significant returns on investment for any given industrial sector or application domain (however, by no means is this true for the overall field of nanotech). Also breakthroughs in any one application domain will substantially advance the state of the art for potentially all other application domains. It is reasonable for SDI to create a futures market in which it predicts certain long term but very realistic goals for each application domain of nanotech. Through cooperation with industry and the investment community it may further pre-contract with various present and potentially future entities which are most likely to be direct beneficiaries of the technology which is spawned from the initial extremely high risk commercial ventures pioneering the basic technology. As in the stem cell commercial example percentages in the various longer term beneficiaries can be used as a strong inducement to present prospective investors in the pioneering commercial entities. As suggested, this percentage may be inversely related to the degree of success of the initial venture and if desired, the risk may be further reduced through the use of a futures market which essentially assures the predicted economic [[--------]]_marks of these various prospective commercial endeavors. The wise investor in the futures market will seek diversification of investment across many different technological sectors of nanotech (thus assuring the large upside which is certainly to occur universally but not necessarily for any one given application commercial domain. SDI could further mediate the long-term opportunities to the original investor by mediating, for example, technology transfer and licensing intellectual property to present or prospective commercial entities which have thus agreed to operate under the terms as provided by SDI. In exchange, SDI could also (as above suggested) provide a resource and technology sharing service and associated partnership brokering service (between potential multiple companies containing potential commercial synergies). In addition it may work with the investment (particularly incubator community) by which it may, without disclosure, of commercial strategies and technologies which are presently or

prospectively planned across the entire nanotech industry of disclosed suggestions for particular commercial and technological opportunities which would appropriately complement and benefit the global strategy or nanotech which is known exclusively buy SDI. This approach in addition to emulating the same united focus and integration of multifaceted technological and R and D initiatives can also ensure the proper distribution of efforts within each technical application domain, the appropriate sharing of information whenever potential for technological complementarity, but not commercial competition exists (which SDI) strives to achieve on an industry wide basis) and the assurance that companies and departments do not duplicate their efforts if at all possible. The investment community through SDI could certainly stimulate conditions as above which band aid the adherence to these terms as a condition to investing. SDI, through incubators could additionally disclose particular commercial and technologic opportunities which are both synergistic to the global SDI strategy as well as pre determine (visa vie SDI's extensive in depth research on the industry to possess significant commercial opportunity. Based upon some existing companies technical proficiency and commercial strategies, some of these emerging opportunities could be disclosed as potential (suggested extension of existing departments or divisions based upon their individual areas of expertise and particular skill sets of its employees.

Please replace the paragraph beginning on page 228, line 1 with the following amended paragraph:

1. There are numerous other extensions and potentially practical applications of the present novel methodology, particularly those applied primarily at the consumer level, and where consumers are provided with an infomediary such as SDI to represent the most individually beneficial actions within the present agent mediated contract negotiation framework. One of the significant technical advances of SDI is the ability to not only represent the particular best interests of an individual (or other entity but also provide; (1) knowledgeable experts (or "knowledge proxies") who within the information rich economic and political universe is able to off load the task of acquiring constantly updated and changing and expanding expert knowledge

within each domain and sector of the economic and political systems. In this regard SDI may, as a service to consumers, represent consumers according to which overall economic scenario which best represents their socio-economic interests which may factor in both long term or short term monetary benefits and/or socio-economic benefits and/or (if they differ in any way from above) personal or political views or objectives. The use of collaborative filtering may provide a useful tool for assuring that proper recommendations for political views reflects economic political and socio-political information available about the user, such economic data of which is typically gleaned passively and may be confirmed by active confirmation of the user along with political views and positions on political issues which may prompt the user in order to collect rapid profiling information about the user is overall political objectives. Thus SDI can effectively in practical terms provide a "continual" personal advisor to guide all consumer activities (via contracts) as political decision making policies, and even these consumer actions to indirectly (via the supply chain) apply political pressure upon organizations in order to achieve certain desired economic, or even politically advantageous objectives, at an individual level. Accordingly, once they are certified on an individual level, SDI could provide synergistic benefit to the ultimate political objectives of each person individually by creating a "global political support strategy" for each group of individuals sharing the same political objectives. SDI may develop information models based on relevant historical data of what political and economic impacts resulted from politicians and political camps and combinations thereof within political and economic conditions which are similar. Within the framework of this methodology an extremely valuable technical advantage of SDI is its capability to monitor huge volumes of information from not only organizations but also news feeds, legal cases, government regulation over industry and profession (which may indirectly affect quality of life of individuals), and/or monetary status of individuals. Case in point, within the health care industry there is a significant amount of covert, however, aggregious attempts by both government and private sector HMO's to limit the quality, scope and depth of health care services which can be provided to the consumer. In accordance with the present SDI framework, an SDI agent acting on behalf of each individual could effectively create an economic and political coalition with the collective economic ability to boycott the most aggregious violators of their monetary and health

care benefits, apply political pressure through believable, perhaps even irrefutable, threats (through individual contractual obligations with SDI) to mandate changes to those particular policies (be it [[--------]] at the governmental, regulatory or legal levels) so as to bring about the desired results at the consequence of voting the relevant decision makers out of office (directly or vis-a-vie their political appointees). SDI, in accordance with its functional objectives could also certainly supply valuable information to users supporting its internal rationale for structuring such coalitions by estimating and presenting to the user such data as the predicted degree of reduction in the quality of health care (from physicians and hospital for that user and her family based upon the negative impact which the present system has upon these entities. In addition, it may be advantageous for the most aggregious abusers to be boycotted by individuals collectively. Based upon the knowledge available to SDI, it may be advantageous to pre-commit or provide a polling-based solution for the individuals constituting these coalitions as to their responses to the desirable actions prescribed if the user rejects the recommendation, SDI may further query the user and/or suggest an alternate strategy (suggest one to SDI). This data about the political issue strategy(s) which the user support may then be used in order to provide direct feedback to politicians with sufficient notice with which to pre-formulate their political strategies at both the micro and macro levels with which to best comply with the adopted or otherwise recommended political and/or economic edicts according to SDI. Or, if it is determined that such pre-knowledge could be abused in such a way as to politically manipulate campaigns, large employers, etc. undermine the political support for these edicts, SDI may determine that it is advantageous to not disclose such information in advance to the target political groups (this, however, is a very subjective and complex analytical process). Thus SDI, representing each common group, must determine and predict which politicians are most likely to ultimately support the issues which are most important to their political objectives for which advanced disclosure of their own political support strategy is likely to advance the strategic knowledge of that politician while assuring that none of their positions on none of the political issues are likely to be ultimately abused by that politician by him/her ultimately changing his/her position on that issue in order to improve his/her chances of election. For this reason, it is also of interest to each group to attempt to predict the ultimate position that each other group

is likely to assure for each political issue in order to determine whether or not pooling their collective influence on that particular issue (including free disclosure to those "trusted" candidates) would be advantageous or information which would be potentially harmful to pre-release to a potential adversary on that issue (which it may ultimately disclose to a candidate opposing that issue and/or modify its own political strategy in a manner which is ultimately antagonistic to the interests of the welfare of that issue or theoretically even issues which that group may wish to disclose in the interest of providing further support for the global political strategy through this form of coalition creation). It is worth noting that within the scope of the present framework it is likely that the availability of such detailed information, both predictively and at an individual level, regarding the ultimate political and economic effects which certain voting in other political support actions via SDI are likely to imply, it is extremely likely that members of each group may be reluctant to provide information, regarding the groups political strategy to public polls.

Please replace the paragraph beginning on page 231, line 10 with the following amended paragraph:

The effects on commercial industry, even specific businesses in which certain actions are likely to result, may be modeled and presented to the user as well as the effects upon the user in light of the investment portfolio of the user. If a particular political position were to be taken, the system could even recommend <u>something</u> [[--]] which is most compatible with a particular political position.

Please replace the paragraph beginning on page 233, line 21 with the following amended paragraph:

~~There may be certain instances in which users at an individual level may be able to provide predicted ------------------------------this benefit can be quantified towards commercial entities or even~~

~~individual users if particular events can be achieved (or particular events prevented).~~ For example, consider a student who is determined to be capable towards achieving substantial real-world success. In one instance the student cannot afford tuition for graduate school. In another instance, the student cannot afford to continue his/her studies due to depleted financial resources. The present system may model and predict likely beneficiaries commercial or even individuals who are likely to benefit and accordingly "insure" certain long-term monetary benefits (if a commercial entities) or even personal or social benefits (if an individual).

Please replace the paragraph beginning on page 234, line 13 with the following amended paragraph:

1   Present estimated industry-wide revenue losses compared to <u>other things.</u> the industry-wide ---- ----------------the server manufacturers as a group sustain (based upon sales data each one individually and secretly submits to SDI).

Please replace the paragraph beginning on page 267, line 1 with the following amended paragraph:

Vendors in all other product categories can retain the ability to compete for any offer which the user receives. It is possible that vendors with exclusive rights may also try to lock a user into *future* purchases. Again, this ability to lock users into future purchase commitments may be auctioned to competitive vendors. The dedicated currency auction web site (e.g., www.creditauction.com) is architecturally very similar to the time-of-purchase competition variation of the service with the exception that it is a market place in which many users may submit their profiles with request for offers from vendors across any or all categories relevant to their profile as requested or agreed to by the user. A variation of this dedicated currency involves a scheme for time shifting into the future the transfer of funds from the users account to the vendor's (thus allowing the users money to accrue interest during that period). Thus dedicated currency

whether it proceeds or preceeds actual purchase events guarantees the vendor sales which can be used <u>to</u> [[---------]] plan capital improvements, attract credit or investment funding while providing benefits ~~such as~~——————————————and/or interest on money spent to consumers.

Please replace the paragraph beginning on page 284, line 22 with the following amended paragraph:

In the case of suspicious behavior we can provide access to law enforcement officials, through seizure of the decryption key for that data (which includes his/her physical location information) and any additional profile data which is considered of immediate critical relevance to the suspect (or prospective) infraction. Such cryptographic techniques for key seizure from a key escrow are well covered in the literature ~~[FRED, WHAT ARE THE REFERENCES?]~~. There may also be certain circumstances in which key seizure may be required after the fact (at some time in the future). For example, if/when certain even moderately "suspicious" behavior patterns are detected, it may be possible for the SDI data warehouse to preserve a comprehensive record of that information (and perhaps the record of that user which precedes and follows that period of interest). Thus preserving evidence which may later prove useful in contributing evidence towards a conviction, acquittal, e.g., proving that a user was not at a particular location/time. A record containing more detailed segments of a user with a proven negative or questionable history may be preserved and general location/time features may be abstracted for the remaining portions of the record (thus compressing the record substantially). This may be performed for regular individuals as well, thus retaining key relevant features while discarding the majority of the record which is irrelevant or redundant.

Please delete all of the text at page 290, line 7, as follows:

~~INSERT>>>>>>>>>>>>>>~~